



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,117	12/11/2003	Matthis Nickel-Jetter	870-003-163	2680
4955	7590	08/11/2005	EXAMINER	
WARE FRESSOLA VAN DER SLUYS & ADOLPHSON, LLP BRADFORD GREEN BUILDING 5 755 MAIN STREET, P O BOX 224 MONROE, CT 06468			NGUYEN, HANH N	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/733,117	NICKEL-JETTER ET AL.	
	Examiner	Art Unit	
	Nguyen N. Hanh	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 3-12, 18-21, 25 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 13-17 and 22-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species C, readable to claims 1-2, 13-17 and 22-24 in the reply filed on 7/13/2005 is acknowledged. The traversal is on the ground(s) that "the consideration of all the species would not involve any additional search". This is not found persuasive because the inventions are distinct have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

2. Claim 16 is objected to because of there is no antecedent basis in the specification for "a collectorless motor". In lights of the specification, the Examiner interprets the limitation as "the electronic controlled motor". Appropriate correction is required.

Claim 23 objected to because of the following informalities: "the number of whose poles" should be written as: ---the number of control magnet poles---.

Appropriate correction is required.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a collectorless motor" must be shown or the feature canceled from claim 16. No new matter should be entered.

Art Unit: 2834

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 13 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Trago et al.

Regarding claim 1, Trago et al. disclose an external rotor motor comprising an internal stator (35 in Fig. 2); a stationary support part (30) supporting the stator; and an external rotor (Col. 3, lines 45-47), cooperating with the internal stator (35), and mounted on bearings for rotation with respect to the stator, said rotor having a casing part (22) on whose inner side is arranged a permanent-magnet arrangement (36) that coacts with the internal stator (35).

Regarding claim 2, Trago et al. also disclose an external rotor motor wherein the motor is electronically commutated.

Regarding claim 13, Trago et al. also disclose an external rotor motor, further comprising, for control purposes, a control magnet (70 in Figs. 2 and 5), secured to the casing part and at least one galvanomagnetic rotor position sensor (61) associated therewith, in order to sense the rotational position of the casing part (22) relative to the support part (30).

Regarding claim 22, Trago et al. also disclose an external rotor motor wherein a sensor arrangement (61 in Fig.2), sensing the rotational position of the external rotor relative to internal stator (35), is arranged between the first rolling bearing (24) and the internal stator (35) mounted on the support part (30).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trago et al. in view of Uryu et al.

Regarding claim 14, Trago et al. show all limitations of the claimed invention except showing the motor wherein a nonmagnetic spacer (58) is provided between the control magnet (60) and the magnet arrangement (50) associated with the electronically commutated motor (12).

However, Uryu et al. disclose a motor structure wherein a nonmagnetic spacer (63 in Fig. 6) is provided between the control magnet (60) and the magnet arrangement (56) associated with the electronically commutated motor for the purpose of minimizing the adverse effect of a magnetic field produce by the rotor magnet on the sensor (Col. 9, lines 5-8).

Since Trago et al. and Uryu et al. are in the same field of endeavor, the purpose disclosed by Uryu et al. would have been recognized in the pertinent art of Trago et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Trogo et al. by employing a nonmagnetic spacer between the control magnet and the magnet arrangement associated with the electronically commutated motor as taught by Uryu et al. for the purpose of minimizing the adverse effect of a magnetic field produce by the rotor magnet on the sensor.

Regarding claim 15, Trago et al. also disclose an external rotor motor wherein the at least one rotor position sensor (61 in Fig. 5), associated with the control magnet (70), is arranged on a circuit board (60) secured nonrotatably to the support part (30).

Regarding claim 16, Trago et al. also disclose an external rotor motor wherein electronic controls of a motor implemented as a collectorless motor are arranged substantially entirely on the circuit board (60).

Regarding claim 17, Trago et al. also disclose an external rotor motor wherein the circuit board (60) extends substantially perpendicular rotation axis of the casing part.

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Trago et al. in view of Shiga et al.

Regarding claim 23, Trago et al. show all limitations of the claimed invention except showing the motor wherein the number of control magnet poles is greater than the number of magnetic poles, coacting with the internal stator.

However, Shiga et al. disclose a motor structure wherein the number of control magnet poles is greater than the number of magnetic poles, coacting with the internal stator (Figs. 5 and 6) for the purpose of increasing the accuracy in the detection of rotational position of the rotor (Col. 6, lines 15-20).

Since Trago et al. and Shiga et al. are in the same field of endeavor, the purpose disclosed by Shiga et al. would have been recognized in the pertinent art of Trago et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Trago et al. by making the number of control magnet poles is greater than the number of magnetic poles, coacting with the internal stator as taught by Shiga et al. for the purpose of increasing the accuracy in the detection of rotational position of the rotor.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Trago et al. in view of Shiga et al. and further in view of Uryu et al.

Regarding claim 24, Trago et al. and Shiga et al. show all limitations of the claimed invention except showing the motor wherein a nonmagnetic spacer ring is arranged between the magnet poles of the external rotor and the control magnet.

However, Uryu et al. disclose a motor structure wherein a nonmagnetic spacer ring (63 in Fig. 6) is arranged between the magnet poles of the rotor and the control magnet (60) for the purpose of minimizing the adverse effect of a magnetic field produce by the rotor magnet on the sensor (Col. 9, lines 5-8).

Since Trago et al., Shiga et al. and Uryu et al. are in the same field of endeavor, the purpose disclosed by Uryu et al. would have been recognized in the pertinent art of Trago et al. Shiga et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Trogo et al. and Shiga et al. by employing a nonmagnetic spacer ring between the magnet poles of the external rotor and the control magnet as taught by Uryu et al. for the purpose of minimizing the adverse effect of a magnetic field produce by the rotor magnet on the sensor.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (571) 272-2031. The examiner can normally be reached on Monday through Friday.


Art Unit: 2834

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg, can be reached on (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

July 28, 2005


DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800